

In the Claims

1-26. (cancelled)

27. (currently amended) A microscopic imaging apparatus for imaging tissue samples for pathological applications through an objective lens, said apparatus comprising:

an objective lens;

a window having a surface capable of being pressed into a contact relationship with the surface of said tissue sample in which said window is in optical communication with said objective lens; ~~and~~

a housing capable of being handheld having at least said objective lens and said window; and

an illumination beam which is focused by said objective lens through said window to said tissue sample, wherein said objective lens receives returned light from said tissue sample representing a tissue section.

28. (cancelled) The apparatus according to Claim 27 further comprising an illumination beam which is focused by said objective lens through said window to said tissue sample.

29. (cancelled) The apparatus according to Claim 28 wherein said objective lens receives returned light from said tissue sample representing a tissue section.

30. (currently amended) The apparatus according to Claim ~~28~~ 27 further comprising a light source for said illumination beam.

31. (currently amended) The apparatus according to Claim ~~28~~ 27 wherein said window is transparent to said illumination beam.

32. (cancelled)

33. (previously presented) The apparatus according to Claim 27 wherein said objective lens has a numerical aperture of less than one.

34. (previously presented) A system for imaging and diagnosing a tissue sample for pathological applications comprising:

an objective lens;

a window having a surface capable of being pressed into a contact relationship with the surface of said tissue sample;

a housing capable of being handheld having at least said objective lens and said window;

an illumination beam which is focused by said objective lens through said window to said tissue sample, in which said objective lens receives returned light from said tissue sample representing a tissue section; and

means for displaying said tissue section to diagnose abnormalities in said tissue sample.

35. (previously presented) The system according to Claim 34 wherein said abnormalities represent a tumor.

36. (previously presented) The system according to Claim 35 wherein said tumor represents one of carcinomas and melanomas.

37. (previously presented) A method for diagnosing a tumor in images of one or more sections of tissue comprising the steps of:

placing said tissue against a window having a surface in a pressure contact relationship with the surface of said tissue;

imaging the tissue through an objective lens to provide at least one image of a section of the tissue; and

diagnosing in said image one or more cells of a tumor in said tissue.

38. (previously presented) The method according to Claim 37 further comprising the step of focusing an illumination beam with said objective lens through said window to said tissue sample.

39. (previously presented) The method according to Claim 38 further comprising the step of providing a light source for said illumination beam.

40. (previously presented) The method according to Claim 37 further comprising the step of visualizing the borders of the tumor in said image.

41. (previously presented) The method according to Claim 40 further comprising the step of excising the tumor cells from said tissue.

42. (previously presented) The method according to Claim 40 wherein said imaging step further comprises the steps of:
receiving return light from said tissue representing a tissue section; and
converting the returned light into electrical signals; and
processing said electrical signals to provide a display of said image of said tissue section.

43. (previously presented) The method according to Claim 37 wherein said tumor represents one of carcinomas and melanomas.

44. (previously presented) The apparatus according to Claim 27 wherein said housing is positionable to locate said window in direct contact with said surface of said tissue sample.

45. (previously presented) The system according to Claim 34 wherein said housing is positionable to locate said window in direct contact with said surface of said tissue sample.

46. (previously presented) The method according to Claim 37 wherein said placing step further comprises the step of pressing said surface of said window into said pressure contact relationship with said surface of said tissue.

47. (currently amended) A microscopic imaging apparatus for imaging tissue samples for pathological applications through an objective lens, said apparatus comprising;

an objective lens;

a window having a surface that is capable being in a direct pressure contacting relationship with the surface of said tissue sample; ~~and~~

a housing capable of being handheld having at least said window lens in optical communication with said objective lens; and

an illumination beam which is focused by said objective lens through said window to said tissue sample, wherein said objective lens receives returned light from said tissue sample representing a tissue section.

48. (previously presented) The apparatus according to Claim 47 wherein said housing is positionable to locate said window in direct contact with said surface of said tissue sample without use of suction to enable said contact.